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09/804,309	03/13/2001	James R. McClellan	264796/ C00-029	9272

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EXAMINER

CHUONG, TRUC T

ART UNIT

PAPER NUMBER

2179

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Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 09/804,309	<b>Applicant(s)</b> MCCLELLAN, JAMES R.	
	<b>Examiner</b> Trúc T Chuong	<b>Art Unit</b> 2179	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. This communication is responsive to Amendment, filed 07/06/04.
2. Claims 1-26 are pending in this application. In the Amendment, claims 1, 7, 10, 14, and 20-26 are independent claims, and claims 1, 4-26 are amended. This action is made non-final.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Habegger (U.S. Patent No. 6,643,642 B1).

As to claim 1, Habegger teaches method for generating an enhanced tree-style graphical representation of interrelationships among a plurality of machine vision entities for display as a graphical user interface on a screen of a visual display unit of a machine vision system, said method comprising:

acquiring a first specification that describes a plurality of hierarchical interrelationships among said plurality of machine vision entities (e.g., fig. 6 shows a plurality of machine nodes/entities and graphical hierarchical interrelationships among machine nodes/entities such as devices, software, tools, hardware, etc.; e.g., col. 7 lines 1-40), the first specification being for

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constructing a tree-style graphical representation of the hierarchical interrelationships among said plurality of machine vision entities (e.g., col. 5 lines 25-36, and fig. 6);

acquiring a second specification that describes a plurality of non-hierarchical data flow interrelationships among said plurality of entities (nodes are related by both hierarchical and non-hierarchical relationships, e.g., col. 1 lines 52-63, and col. 7 lines 1-40), the second specification being for enhancing the tree-style graphical representation by adding non-hierarchical data flow interrelationships among the plurality of machine vision entities (dashed line 606b shows a cross-linked relationship between that data nodes which are located in different hierarchies, e.g., col. 7 lines 29-40);

constructing said enhanced tree-style graphical representation simultaneously representing graphically both said set of hierarchical interrelationships and said plurality of non-hierarchical data flow interrelationships among said plurality of machine vision of entities (fig. 6 and col. 7 lines 1-40); and

displaying said enhanced tree-style graphical representation to produce said graphical user interface on said screen of said visual display unit of said machine vision entities (fig. 6).

As to claim 2, Habegger teaches the method according to claim 1, wherein said acquiring a first specification includes at least one of:

extracting said first specification from a digital file stored on a computer readable medium (The invention also provides database systems and methods, which exploit relationships between the data stored in a database, e.g., col. 9 lines 8-14); and

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obtaining said first specification from an interactive graphical user interface (the user interface for presentation to a user, the search engine retrieves the unique identifiers from all of the data nodes that are hierarchically below the first data nodes, e.g., col. 2 lines 51-61).

As to claim 3, Habegger teaches the method according to claim 1, wherein said acquiring a second specification includes at least one of:

extracting said second specification from a digital file stored on a computer-readable medium (nodes are related by both hierarchical and non-hierarchical relationships, e.g., col. 1 lines 52-63, and col. 7 lines 1-40); and

Obtaining said second specification from an interactive graphical user interface (dashed line 606b shows a cross-linked relationship between that data nodes which are located in different hierarchies, e.g., col. 7 lines 29-40).

As to claim 4, Habegger teaches the method according to claim 1, wherein said constructing enhanced tree-style graphical representation further comprises:

forming an initial tree-style graphical representation that depicts said set of hierarchical interrelationships among said plurality of machine vision entities (fig. 6); and

incorporating said plurality of non-hierarchical data flow interrelationships into said initial tree-style graphical representation, by depicting said plurality of non-hierarchical data flow interrelationships without altering said plurality of hierarchical interrelationships depicted in said initial tree-style graphical representation, to produce said enhanced tree-style graphical representation (note the rejection of claim 1 above, fig. 6).

As to claim 5, Habegger teaches the method according to claim 4, wherein said forming includes graphically depicting a hierarchical interrelationship between a parent entity and a child

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entity in such a manner that the child entity in said hierarchical interrelationship appears left-indented from where the parent entity in said hierarchical interrelationship appears (elements 604k and 604n of fig. 6).

As to claim 6, Habegger teaches the method according to claim 4, wherein said incorporating includes graphically displaying a data flow connection between two machine vision entities involved in any one of said plurality of non-hierarchical interrelationships data flow interrelationships proximate to where said two machine entities appear in said initial tree-style graphical representation (e.g., col. 1 lines 52-63, and fig. 6).

As to claim 7, Habegger teaches a method for modifying an enhanced tree-style graphical representation of interrelationships among a plurality of machine vision entities for display as a modified graphical user interface on a screen of a visual display unit of a machine vision system, said method comprises at least one of:

adding a new machine vision entity to the depiction of said enhanced tree-style graphical representation that depicts simultaneously hierarchical interrelationship among said machine vision entities, and non-hierarchical data flow interrelationships among said machine vision entities (the user interface 102 also presents the searchable terms of the new subset of data nodes in the hierarchy, from the perspective of the new target data nodes, e.g., col. 6 lines 2-8); and

deleting a depicted machine vision entity from the depiction of said enhanced tree-style graphical representation that depicts simultaneously hierarchical interrelationships among said machine vision entities, and non-hierarchical data flow interrelationships among said machine vision entities (by changing search terms from Broader Terms (BTs), any number of Narrower

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Terms (NTs), some database engines can be excluded or included during searching, e.g., col. 6 lines 16-30).

As to claim 8, Habegger teaches the method according to claim 7, wherein said adding further comprises:

defining said new machine vision entity (e.g., some database engine can be excluded or included during searching, e.g., col. 6 lines 16-30);

specifying a position in said enhanced tree-style graphical representation where said new machine vision entity can be inserted (e.g., col. 6 lines 16-30, fig. 6);

modifying said enhanced tree-style graphical representation to incorporate said new machine vision entity at said position (e.g., col. 6 lines 16-30, fig. 6); and

displaying said enhanced tree-style graphical representation, modified by said modifying to produce said modified graphical user interface on said screen of said display unit of said machine vision entities (e.g., col. 7 lines 1-40).

As to claim 9, Habegger teaches the method according to claim 7, wherein said deleting further comprises:

selecting said depicted machine vision entity from said enhanced tree-style graphical representation (e.g., col. 7 lines 1-40, and fig. 6);

identifying any hierarchical interrelationship and any non-hierarchical interrelationship, associated with said depicted machine vision entity (nodes are related by both hierarchical and non-hierarchical relationships, e.g., col. 1 lines 52-63, and col. 7 lines 1-40);

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modifying said enhanced tree-style graphical representation to incorporate the deletion of said depicted machine vision entity and the removal of said any hierarchical interrelationship and any non-hierarchical interrelationship, identified by said identifying (e.g., col. 6 lines 32-61); and

displaying said enhanced tree-style graphical representation, modified by said modifying to produce said modified graphical user interface on said screen of said display unit of said machine vision system (e.g., col. 7 lines 1-40, and fig. 6).

As to claim 10, Habegger teaches a method for modifying an enhanced tree-style graphical representation of interrelationships among a plurality of machine vision entities for display as a graphical user interface on a screen of a visual display unit of a machine vision system, said method comprises at least one of:

adding a new hierarchical interrelationship to the depiction of said enhanced tree-style graphical representation that depicts simultaneously hierarchical relationships, and non-hierarchical data flow interrelationships among a plurality of machine vision entities (dashed line 606b shows a cross-linked relationship between that data nodes which are located in different hierarchies, e.g., col. 7 lines 29-40);

deleting a depicted hierarchical interrelationship from the depiction of said enhanced tree-style graphical representation that depicts simultaneously hierarchical interrelationships, and non-hierarchical data flow interrelationships among a plurality of machine vision entities (e.g., col. 6 lines 32-61); and

updating a depicted hierarchical interrelationship in the depiction of said enhanced tree-style graphical representation that depicts simultaneously hierarchical interrelationships and non-hierarchical data flow interrelationships among a plurality of machine vision entities (by



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changing search terms from Broader Terms (BTs), any number of Narrower Terms (NTs), some database engines can be excluded or included during searching, e.g., col. 6 lines 16-30).

As to claim 11, it can be rejected under similar rationale to claim 8. Note the rejection of claim 8 above.

As to claims 12 and 13, they can be rejected under similar rationale to claim 9. Note the rejection of claim 9 above.

As to claim 14, Habegger teaches a method for modifying an enhanced tree-style graphical representation of interrelationships among a plurality of machine vision entities for display as a modified graphical user interface on a screen of a visual display unit of a machine vision system, said method comprises at least one of:

- adding a new non-hierarchical data flow interrelationship to the depiction of said enhanced tree style graphical representation (dashed line 606b shows a cross-linked relationship between that data nodes which are located in different hierarchies, e.g., col. 7 lines 29-40);

- deleting a depicted non-hierarchical data flow interrelationship from the depiction of said enhanced tree-style graphical representation (fig. 6);

- updating a depicted non-hierarchical data flow interrelationship in the depiction of said enhanced tree-style graphical representation (fig. 6).

As to claims 15 and 16, they can be rejected under similar rationale to claim 9. Note the rejection of claim 9 above.

As to claim 17, Habegger teaches the method according to claim 14, wherein said updating further comprises:

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selecting said depicted non-hierarchical data flow interrelationship from said enhanced tree style graphical representation (dashed line 606b shows a cross-linked relationship between that data nodes which are located in different hierarchies, e.g., col. 7 lines 29-40);

revising the specification associated with said depicted non-hierarchical data flow interrelationship to produce a modified non-hierarchical data flow interrelationship (fig. 6);

modifying said enhanced tree-style graphical representation to replace said depicted non-hierarchical data flow interrelationship by said modified non-hierarchical data flow interrelationship (dashed line 606b shows a cross-linked relationship between that data nodes which are located in different hierarchies, e.g., col. 7 lines 29-40); and

displaying said enhanced tree-style graphical representation, modified by said modifying to produce said modified graphical user interface on said screen of said display unit of said machine vision system (e.g., col. 7 lines 29-40, and fig. 6).

As to claim 18, note the rejection of claim 1 above, and e.g., fig. 6.

As to claim 19, it can be rejected under similar rationale to claim 1. Note the rejection of claim 1 above.

As to claims 20-23, they are computer program product claims of the method claims 1, 7, 10, and 14. Note the rejections of claim 1, 7, 10, and 14 above respectively.

As to claims 24-26, they are system claims of the method claims 1, 2, and 13. Note the rejections of claims 1, 2, and 13 above respectively.

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### ***Response to Arguments***

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kiuchi (U.S. Patent No. 5,644,740) teaches hierarchical displays, tree-style structure, and interrelationship among elements (cols. 4-21 and figs. 1, 15-18, 20, 36, and 37).

Arnoux et al. (U.S. Patent No. 6,553,355 B1) teach hierarchical, non-hierarchical tree structures, relationships among entities (cols. 3-29 and figs. 1-3).

Alimpich et al. (U.S. Patent No. 6,11,579) teach tree, hierarchical, and machine entities (cols. 2-7 and figs. 2-5).

Malacinski et al. (U.S. Patent No. 6,348,935 B1) teach tree view display, hierarchical, different levels and relationships, and graphical enhancement (cols. 2-13 and figs. 5-7).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Truc T Chuong whose telephone number is 703-305-5753, and starting October 2004, a new telephone number will be 571-272-4134. The examiner can normally be reached on M-Th and alternate Fridays 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on 703-308-5186, and starting October 2004, a new telephone number will be 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Truc T. Chuong

10/14/04

BAH HUYNH  
PRIMARY EXAMINER